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14. ABSTRACT

Some theorists claim that technology has so altered the levels of war – the strategic, the operational, and the tactical – to the point that the differences between them are no longer significant. As numerous observers have pointed out, long-held principles on the formulation and conduct of war, almost all of which are grounded in the Industrial or pre-Industrial Age, chafe against new realities attendant to the Information Age and the current operational environment.

During another era in the evolution of warfare, Clausewitz observed that "very few of the new manifestations in war can be attributed to new inventions or departures in ideas…they result mainly from the transformation of society and new social conditions." What is interesting about his 19th century formulation is that now, at the cusp of the Information Age, we arguably find ourselves at a point that Clausewitz could scarcely have imagined. That is a point at which *both* the impact of new technology (such as the Internet, modern communications, precision weaponry, and weapons of mass destruction) and societal transformation (such as globalization and the rise of non-state transnational actors) are simultaneously driving changes in the conceptualization of warfare.

15. SUBJECT TERMS
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"It's the Message, Stupid:
The Rise, Power and Implication of Information and Technology in 21st Century
Warfare"

by

Keith B. Hauk

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A paper submitted to the faculty of the Naval War College in partial satisfaction of the
requirements of the Department of Joint Military Operations

The contents of this paper reflect my personal views and are not necessarily endorsed by
the Naval War College or the Department of the Navy

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23 October 2006

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INTRODUCTION

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During another era in the evolution of warfare, Clausewitz observed that "very few of the new manifestations in war can be attributed to new inventions or departures in ideas…they result mainly from the transformation of society and new social conditions."[2] What is interesting about his 19th century formulation is that now, at the cusp of the Information Age, we arguably find ourselves at a point that Clausewitz could scarcely have imagined. That is a point at which *both* the impact of new technology (such as the Internet, modern communications, precision weaponry, and weapons of mass destruction) and societal transformation (such as globalization and the rise of non-state transnational actors) are simultaneously driving changes in the conceptualization of warfare.

This is not to say that Clausewitz had it wrong – he did not. What he could not have foreseen in the early 19th century was the unique historical intersection of epic technological change and societal transformation away from the nation-state as a defining construct, both as a means of political identity and as the principal protagonist on both sides of conflict. As part of that epic technological change, he further could not have

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[1] Vice Admiral (Retired) Arthur Cebrowski, quoted in the introduction to *Rethinking the Principles of War*, ed. Anthony McIvor, (Annapolis, Maryland: U.S. Naval Institute Press, 2005)
[2] Carl von Clausewitz, *On War*, ed. Michael Howard and Peter Paret (Princeton, New Jersey: Princeton University Press, 1989), 515.

foreseen the near-instantaneous movement of information across traditional national

boundaries as well as the proliferation of that information such that it has a profound

political effect.[3] The enduring genius of his fundamental assertions in *On War* is that

they still apply. The area of change is in the supporting concepts – those "long-held

principles" – that are derived from his work as well as the other classical military

theorists. As he states, war has two natures – objective and subjective – the first is

permanent and the second is subject to change.[4]

Some contemporary observers, like Robert Leonhard, have stated that 21st century

warfare demands a new discipline for conceptualizing conflict. He asserts that

operational art is an Industrial Age idea that is ill-suited to the cultural and political issues

inherent in Information Age, or, as alternatively described, fourth-generation warfare.[5]

Others, like retired Lieutenant General Dave Barno, former Commander of coalition

forces in Afghanistan, argue for a fundamentally new war-fighting construct that expands

on the current, three-tiered tactical, operational, and strategic paradigm.[6]

DISCUSSION AND ANALYSIS

The premise of this brief work is simple. The impacts of technological innovation

have reduced, but not eliminated or forced change to, the distinctions between the

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[3] Max Boot, *War Made New: Technology, Warfare, and the Course of History, 1500 to Today* (London: Penguin Books, October 2006), 316. Boot's point is that "as industrial technology proved to be a powerful instrument of centralization, so information technology has proven to be an equally powerful instrument of decentralization with profound political, as well as economic effect."
[4] Clausewitz, p. 85.
[5] Robert Leonhard, "From Operational Art to Grand Strategy," *Rethinking the Principles of War*, ed. Anthony McIvor (Annapolis, Maryland: U.S. Naval Institute Press, 2005), 217. The characterization of Fourth Generation Warfare attributes to Thomas X. Hammes in *The Sling and the Stone*, who describes four generations of warfare tied to technological evolutions dating from the development of gunpowder. In the current evolution – fourth generation warfare – an adversary uses all available networks to convince an adversary's political decision-makers that their strategic goals are either unachievable or too costly for the perceived benefit.
[6] Lieutenant General David Barno, "Challenges in Fighting a Global Insurgency," *Parameters* (Summer 2006): 15-29.

tactical, operational or strategic levels of war. Of concern here is not the technology that allows precision targeting and feeds the American drive to substitute firepower for manpower. Rather it is with the information revolution that enables everything from the sensor-shooter interface to the 24/7 news cycle and its effect on the policy process. However if the reader seeks the Rosetta stone for squaring the conduct of Information Age warfare in a 24/7 news cycle under the glare of a polarized political environment, go no further. Such work is left for future efforts.

In examining this thesis, some review of current thinking is in order. First, virtually all observers agree that the information revolution is "generating capabilities that are faster, reach farther, are more precise, and more efficient."[7] It is in the response to those information capabilities where there is growing divergence from those long-held principles on the formulation and conduct of war. Leonhard, previously cited, takes the entire concept of operational art to task as a "purely military concept", and instead argues for a theory of "grand strategy" to guide the conduct of Information Age warfare.[8] While in its strictest definition operational art is the "art and science of employing military forces to attain strategic and operational objectives[9], Leonhard's assertion that operational art be put on the shelf until a peer competitor emerges is overwrought. Operational art will retain its relevance even in Information Age warfare – but it must expand in scope beyond mere "employment of military forces" and accrue to all elements of national power – as the essential mechanism to link the levels of war.

[7] Brigadier General Dave Fastabend, "Rethinking Transformation and Operational Art," *Rethinking the Principles of War*, ed. Anthony McIvor (Annapolis, Maryland: U.S. Naval Institute Press, 2005), 165.
[8] Robert Leonhard, "From Operational Art to Grand Strategy," *Rethinking the Principles of War*, ed. Anthony McIvor (Annapolis, Maryland: U.S. Naval Institute Press, 2005), 217. Leonhard uses the term "grand strategy" in order to distinguish it from the more common use of the term. In his formulation, "grand strategy" encompasses the art and science of employing all elements of national power.
[9] Milan Vego, *Operational Art*, (Newport, Rhode Island: U.S. Naval War College Press), 2005: 2.

Far more interesting in a review of current thinking is the paradigm offered by Lieutenant General (Retired) David Barno. He posits a construct that adds a fourth level of war, the political level at the apex, to "reflect recognition of the "grand-strategic" level that acknowledges the inherent purpose that lies beyond the purely military character or war…that are often if not always political in nature."[10] He asserts that we ignore the political implications of our actions at our peril. Graphically portrayed, his construct is illustrated as follows:
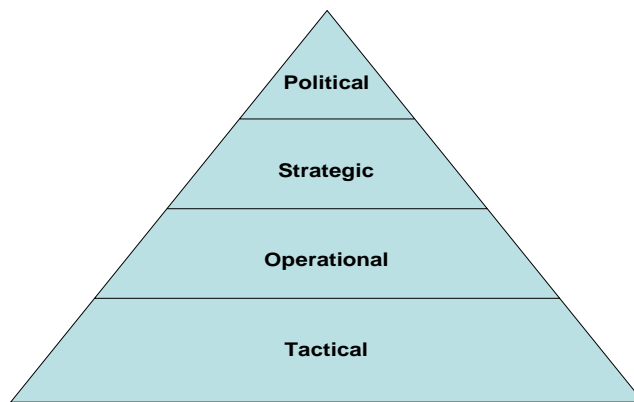
In both cases, the gentlemen have properly diagnosed the problem, but prescribed the wrong cure. They understand and acknowledge that the impetus for necessary change is the fact that the political-strategic targets of our adversaries in the current operational environment are the decision-makers and populations in the U.S. and the global community. They further understand and stipulate to the critical role that information

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[10] Barno, "Challenges in Fighting a Global Insurgency," 18. The graphical description of Lieutenant General Barno's construct is taken from his work in *Parameters* as well.

and technology play in the current "war of perceptions"[11] against Al-Qaeda, that is protracted in nature and in which "political will is our critical vulnerability."[12]

However, the wrong cure is prescribed in misunderstanding the implications of the fact that practitioners of Information Age warfare, especially our adversaries, "focus on the political aspects of the struggle."[13] Those "political aspects" do not necessitate shelving operational art, nor do they require adding a fourth level of war. Our adversaries focus on "political aspects" in a global struggle where tactical actions can have near-instantaneous strategic effects, and strategic decisions can be translated into tactical action in near-real time – information technology provides the essential means for the strategic-to-tactical linkage.[14] The unstoppable processes of diffusion ensure that technological capability, and particularly information technology, is readily available to speed that linkage – for our good or ill.[15]

Consider the Marine Corps' concept of the "strategic" corporal and what it is that makes him strategic – it is the implications of the actions, *the tactical actions*, he undertakes. Whatever the strategic effects attendant to his action, they are political in nature and captured for all, for good or ill, to see via modern information technology – the Internet, a 24/7 global media, and modern communications. In the first battle of Fallujah, negative news coverage succeeded in doing what Saddam never could: it

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[11] The characterization of current operations against Al-Qaeda and associated movements worldwide belongs to GEN John Abazaid, Commander, US Central Command, who has characterized the on-going struggle in this fashion during numerous public pronouncements.
[12] Thomas X. Hammes, "Rethinking the Principles of War: The Future of Warfare," *Rethinking the Principles of War*, ed. Anthony McIvor (Annapolis, Maryland: U.S. Naval Institute Press, 2005), 276.
[13] *Ibid*, p. 270.
[14] Frank Hoffman, "Small Wars Revisited: The United States and Nontraditional Wars," *Journal of Strategic Studies* (December 2005): 16.
[15] Colin Gray, "How Has War Changed Since the End of the Cold War," *Parameters* (Spring 2005): 21. *The Diffusion of Military Technology and Ideas* (Stanford, California: Stanford University Press, 2003) also offers a compelling look at how technologies spread and whether or not they are adopted for use.

stopped the U.S. military in its tracks; in the words of Lieutenant General James Conway, commander of the First Marine Expeditionary Force, 'Al Jazeera kicked our butts'."[16] As reports indicate, early moves to decisively engage and defeat insurgent groups were stymied by media reporting of hardship and considerable damage, political pressure to limit the assault quickly followed and the Marines subsequently withdrew; in the example, the abiding perception was one of strategic defeat for U.S. forces regardless the tactical success of the forces on the ground.[17]

Here is where the prior assertion that Clausewitz did not have it wrong is most germane; he understood that policy drives, or at least should drive, war. And, in the case of Information Age warfare enabled by modern technology, politics represents not an independent level of war above the strategic but instead has renewed (some might say 'rediscovered') emphasis across the three existing, and correctly formulated, levels of war. Likewise, a wake for operational art is a bit premature; a transformation of operational art to expand beyond just the military elements of national power is more in order.[18] Brigadier General Dave Fastabend, chief of the Army's futures center, addresses the expectations for future operational art in response to Information Age warfare and as part of the Army's on-going process of transformation. As part of that growth, Fastabend

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[16] Max Boot, *War Made New: Technology, Warfare, and the Course of History, 1500 to Today* (London: Penguin Books, October 2006), 414.
[17] Kenneth Payne, "The Media as an Instrument of War," *Parameters* (Spring 2005), 88-89.
[18] Leonhard, "Operational Art to Grand Strategy," *Rethinking the Principles of War*, 221. Leonhard acknowledges that "the current doctrine of operational art can be used successfully in the current and future operational environment." (p. 221). However he argues through both false analogy ("we are using a steak knife instead of a scalpel") and false premise ("the current operational environment has changed, therefore we need a different way") that it represents a sub-optimal solution, and that we "should break with our past and refocus attention on grand strategy." While a detailed cost-benefit analysis is well beyond the scope of this paper, a cursory examination of the investment made by the military in the concept development and implementation – particularly the wealth of available intellectual capital – of operational art since the early-1980s would argue for its adaptation, not its deletion.

posits the execution of "concurrent and subsequent stability operations" as constituting

one of several significant changes to operational art.[19] With the designation of the State

Department as the U.S. government lead for stability and reconstruction operations, this

represents one possible area of growth for operational art beyond just the military

elements of national power. As war occurs interconnected across those three levels, it is

fought in three domains – the physical, the cognitive, and the informational; it is

incumbent on the U.S. to use informational capabilities to counter and exploit as required,

to its political advantage, the processes and technologies used by our adversaries.[20] In a

"war of perceptions", as the combatant commander charged with fighting the largest

piece of it has stated, the use of information technology to manage and shape –

controlling them is impossible – those perceptions provides an essential means to

political advantage.

By way of analogy, consider the three levels of war as a body. Strategic is the

head and the brain, providing purpose, guidance and direction; operational is the torso,

providing linkage to the extremities; tactical is the arms, legs, hands and feet where

purpose, guidance and direction are translated into action. Politics (or alternatively

phrased, policy) then is the vascular system connecting the three, and information the

blood coursing through it. Like blood, that information flows faster or slower based on

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[19] Brigadier General Dave Fastabend, "Rethinking Transformation and Operational Art," *Rethinking the Principles of War*, ed. Anthony McIvor (Annapolis, Maryland: U.S. Naval Institute Press, 2005), 161-163. In addition to concurrent and subsequent stability operations, Fastabend portends several other changes for operational art, including *shaping and entry operations*, *intra-theater operational maneuver*, and *network-enabled battle command*

[20] Vice Admiral (Retired) Arthur Cebrowski quoted in "Networking, Swarming, and Warfighting", David Hughes, *Aviation Week and Space Technology,* 29 September 2003. In the article, Cebrowski highlights that fact that our adversaries attract people to their ideas, and plan and conduct operations, using highly technical means including Internet and satellite communications; he further stipulates that we must be equally adept in countering them. While Cebrowski does not address that "countering" as a means to exploit political advantage, the connection is evident given that wars are fought to advance policy goals.

the nature of the exertions placed on the system, and, optimally, its flow controlled by the head and the brain.

Hence the fundamentally political nature of all conflict, notwithstanding the American preference for war as an end unto itself instead of the means to an end that it is[21], affects war at all levels – whether the actors involved at the time realize it or not. Thus, what was true for Clausewitz remains valid today. Policy drives war, both across the levels of war and the domains in which it is fought. What have changed are the temporal aspects of the effects of policy on those levels and domains. That temporal change is wholly driven by advances in information technology. What once took weeks by courier and later hours by radio or teletype now happens as quickly as a posting to a web page or a satellite transmission to a live television broadcast. The levels of war remain as relevant today as they have ever been; if anything, their applicability and linkage to policy across all levels is made hyper-sensitive based on the impact of information technology.

RECOMMENDATIONS

Given that the levels of war as currently formulated remain both relevant and significant with a renewed emphasis on the age-old political ends to which all wars are fought due to the revolution of information technology, two questions are pertinent – "why should we care and what should we do about it?" In consideration of the preceding discussion, why we should care should be fairly self evident. However, consider one

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[21] Colin S. Gray, "The American Way of War: Critique and Implications," *Rethinking the Principles of War*, ed. Anthony McIvor (Annapolis, Maryland: U.S. Naval Institute Press, 2005), 13-40. Gray offers an excellent analysis and critique of the American way of war. As part of his discussion, Gray characterizes the American way of war as, among other things, apolitical, in which we wage war as an end unto itself, and ignore, as discussed previously, the dictates of Clausewitz as well as Sun-Tzu and Thucydides.

additional point from Lieutenant General Barno, a man – given his operational

experience in Afghanistan – who should know. "Our enemies are committed to an

unlimited war of unlimited means – al Qaeda will clearly use a nuclear weapon against

the United States if it gains the means – how can we continue to regard this fight as a

limited war and keep our focus on accumulating an unbroken series of battlefield tactical

successes which we somehow think will collectively deliver victory."[22] We must link

those tactical actions through operational design to strategic objectives that deliver a

political solution, and the levels of war provide the framework in which that linkage

occurs.

Far more important is the consideration of "what do we do about it?", for this gets

to substantive recommendations on how to better apply and manage the levels of war in a

technologically-sensitive, politically-charged where our adversaries use the informational

aspects of that technology against us to further their political ends. What makes it critical

is the earlier characterization, from Hammes, of political will as our critical vulnerability

in a protracted conflict. Exacerbating this critical vulnerability is the fact that our society

is permanently vulnerable to disruption and it is the threat of disruption, if not the act

itself, our enemies seek to exploit in order to target our political will.[23] A discussion of

competing paradigms on whether a critical vulnerability or a critical strength leads

operational planners to the deduction of a center of gravity is beyond the scope of this

paper. Regardless the paradigm used and whether political will is in fact both a critical

vulnerability and a center of gravity – but I am convinced that it is – as a fundamental

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[22] Barno, "Challenges in Fighting a Global Insurgency," 27.

[23] Harlan Ullman, "On War: Enduring Principles or Profound Changes," *Rethinking the Principles of War*, ed. Anthony McIvor (Annapolis, Maryland: U.S. Naval Institute Press, 2005), 80.

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enabling capability in war it represents something that must be protected. Within the thesis of this work how one protects and maintains political will against an adversary who uses information technology to translate tactical actions into near-real time strategic effect provides the basis for three recommendations.

The first recommendation deals with strategy itself. Despite no less than seven national-level documents[24] that address different pieces of a holistic strategy for Information Age warfare, there exists no overarching strategy for the first war of the 21st century. In the words of Tom Donnelly, "we need to imagine a comprehensive strategy that responds to the challenge, and accounts for the kind of war this is and the enemy we face."[25]   At the risk of sounding trite, where is the Information Age equivalent of "Germany first, Japan second" or the Cold War containment strategy of George Kennan?

While a detailed discussion of what that strategy should be is beyond the scope of this work, three things are certain based on earlier discussions. One, that strategy must account for the fact that we face a diffuse group of enemies who seek to synchronize tactical action in order to achieve near-real time strategic effect. Second, we must account for the fact that those enemies will use information as a decisive weapon to undermine our political will; in fact it is information technology they will use to achieve that near-real time strategic effect. Additionally, in the context of General Abazaid's characterization of this as a "war of perceptions", we must realize that unlike the Cold

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[24] To name but a few of these documents, they include the March 2006 *National Security Strategy*, the March 2005 *National Defense Strategy*, the February 2006 *Quadrennial Defense Review*, the February 2003 *National Strategy for Combating Terrorism*, the July 2002 *National Strategy for Homeland Security*, the June 2005 *Defense Strategy for Homeland Defense and Civil Support*, and the November 2005 *National Strategy for Victory in Iraq*.
[25] Tom Donnelly, "Five Long Years: The Pentagon Still Imagines War as it Should Be, Rather Than as it Is," *Armed Forces Journal* (September 2006): 3.

War or the two world wars, this is less a global war than a contest for the future of the

Islamic world; that is, a large but diffuse regional conflict with global implications.[26]

Given those three starting points, David Kilcullen, Chief Strategist for the Office

of the Coordinator for Counterterrorism at the State department, has proffered an outline

for a strategy that addresses these issues. While a discussion of the strategy's details are

outside the area of this work, what makes his proposal so powerful is its focus on

information as the foundation that underwrites all other actions in the strategy in order to

control perception and public opinion.[27] As he points out, until a foundation of

information and information operations is developed nothing else can be effective. This

is because the adversary's use of information to target our center of gravity, political will,

must be negated before we can achieve success.

The second recommendation deals with political will itself and the impact of

information on it. In October 2003, Rear Admiral John Morgan and members of the

Secretary of the Navy's action team authored an article in the U.S. Naval Institute journal

Proceedings titled Rethinking the Principles of War that ultimately became an edited

book of essays of the same name. While one can debate the utility of principles of war –

and many have – in order to determine whether they retain utility in the Information Age,

or instead represent another relic grounded in the Industrial Age with limited utility in the

current operational environment they retain an important function as a grounding basis

for doctrine. One must however, use them with appropriate health warnings – they are

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[26] *Ibid*, p. 3.
[27] Dr. David J. Kilcullen, "Three Pillars of Counterinsurgency," (Remarks delivered at the U.S. Government Counterinsurgency Conference, Washington D.C., 28 September 2006). Kilcullen terms his proposed framework as the "Three Pillars" (each of equal importance) of Security, Political and Economic action in order to establish Control. Underwriting these three pillars is a foundation of Information.   As Kilcullen envisions it, Security, Political and Economic action are critical to success, but to be effective they must rest upon and integrate with a broader information strategy.

descriptive, not prescriptive, and they must evolve over time since they are, as Clausewitz termed it, part of the subjective nature of war.

In the article *Rethinking the Principles of War*, one of the points they offered was that it was time to recognize will as a principle of war; this consideration was carried forward into the book. As Morgan offers, "from the individual war fighter to the resolve of a nation, will is often the deciding factor in war."[28] Since political will represents a critical vulnerability and a center of gravity for the United States, its inclusion as a principle of war will establish it at the forefront of consideration for military planners.

Closely tied to will is the issue of how information (and associated technology) is used to undermine it. Of importance here, in a "war of perceptions", is how actions are perceived; what makes it critical is the speed at which that information is now available and the resulting rapidity in which perceptions are formed. This argues for the inclusion of legitimacy or credibility as a principle of war, particularly given the long recognition of the importance of legitimacy (or credibility) in counterinsurgency operations – which, thus far, has been the dominant form of warfare in the Information Age.[29]

Closely related to the issue of will and legitimacy, is the issue of spatial factors in prosecuting Information Age warfare. The globalization associated with the Information Age means that, for the foreseeable future, conflict will center on heavily populated areas due to their attendant concentration of, among other things, communications networks.[30] As Morgan points out in his work, this phenomena may well necessitate a reconsideration

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[28] Rear Admiral John Morgan and Dr. Anthony McIvor, "Rethinking the Principles of War," *U.S. Naval Institute Proceedings* (October 2003): 37.
[29] Hoffman, "Small Wars Revisited: The United States and Nontraditional Wars," 20. Hoffman prefers use of the term "credibility" rather than "legitimacy."
[30] *Ibid*, p. 19.

of mass versus precision; as he terms it, "given the likelihood that targets will be in an urban setting, we may consider the principle (mass) as more accurately a concentration of effect rather than of mass."[31] Unspoken by Morgan in his work, but the reason it is so important here, is the fact that a 'missed' target in such an environment – or, conversely one that is hit but with significant collateral damage – will be turned against us in a coordinated information operations campaign. Such use of information in near-real time to translate tactical action into strategic effect will once again serve to undermine political will. As Morgan alludes, perhaps concentration of effect is the more appropriate framework than simple mass. This is particularly important with regard to the previously discussed expansion of operational art beyond purely military considerations to stress the importance of employing all elements of national power to link tactical action to strategic objectives.

The final recommendation deals with information as one of the four elements of national power. Simply put, who is responsible for the information element of national power? Responsibility for the others is reasonably clear – diplomacy is the purview of the State Department, military is with Defense, and economic, while somewhat more diffuse, is essentially bifurcated between the Treasury and Commerce Departments depending on the issue at hand. Responsibility for the information element of national power is more clouded; given its absolute importance to Information Age warfare, it must be made clear. This is not to degrade the importance of establishing unity of effort among government agencies in prosecuting Information Age warfare; instead it assigns responsibility to a government agency to ensure that unity of effort actually occurs. Nor

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[31] Rear Admiral John Morgan and Dr. Anthony McIvor, "Rethinking the Principles of War," 36.

is this yet another call for 'we need a Goldwater-Nichols Act for the interagency'; we do, and volumes have been written on that topic.

What is needed is an informed assessment, grounded – one would hope – in a comprehensive strategy, on who among the federal government "owns" the information element of national power and the responsibility to built and sustain unity of effort in applying it in support of strategic objectives. Two issues here are particularly important.

First, the Pentagon is the absolutely wrong place to ascribe responsibility for the information element of national power. The Defense Department, with its massive resources and unrivaled technical means is a key supporting actor in applying the information element of national power. However its post-9/11 forays into primary responsibility for applying the information element of national power have been, at best, furtive and stillborn.[32] Second, wherever ultimate responsibility for the information element of national power resides the message that they produce cannot come with a "made in the USA" stamp. While those messages may represent the preferred themes of the U.S. interagency, they must, in order to maintain U.S. legitimacy as well, reflect the best of good faith efforts will our allies and coalition partners – particularly those most affected by the actions of our adversaries.

So, where should responsibility reside? Sometimes, the obvious answer is the best, and in this case it is. The State Department should be the U.S. government lead for applying the information element of national power. The National Security Council, who, through the Policy Coordinating Committee process, is the current *de facto* owner,

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[32] Leigh Armistead, *Information Operations: Warfare and the Hard Reality of Soft Power* (Dulles, Virginia: Potomac Books, 2004), 135-136. Armistead has a detailed account of the Pentagon's failed efforts in 2002 to establish the *Office of Strategic Information* as the lead organization to coordinate a "strategic perception management campaign."

simply does not have means sufficient to the task, although they would be critical to

shifting the mindset of the national leadership to undertake this change.[33] The Pentagon,

notwithstanding the reasons cited above and a resource base that dwarfs any other

government agency simply does not have a sufficient global footprint to accomplish the

task. The State Department, through its embassies and consulates, is truly global.

Additionally, through its country teams around the world State has in-place 'building

blocks' around the globe upon which other U.S. government agencies and international

partners – both government and non-government – can fall in.[34] Finally, its emerging

lead role for the U.S. government in stability, transition and reconstruction operations –

and the importance of those operations for the foreseeable future – further burnish the

rationale for State taking the lead role for the information element of national power.

CONCLUSION

"While the U.S. has demonstrated capacity…to dominate with its technological
supremacy and computer software, it has not yet mastered modern information warfare,
where the most important software exists – between the ears of the local population. At
the national level, the U.S. government has 'unilaterally disarmed' itself in terms of
public diplomacy."
Frank Hoffman, in *Small Wars Revisited, The United States and Nontraditional Wars*

It is time to re-arm. Given the power of information and associated technology to

move anywhere on the globe almost instantaneously, it becomes a force multiplier to the

belligerent that can best employ the informational domain to secure and sustain a

positional advantage.[35] However this "positional advantage" is temporal, not enduring.

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[33] *Ibid*, p. 137.
[34] Dr. David J. Kilcullen, "Three Pillars of Counterinsurgency," (Remarks delivered at the U.S.
Government Counterinsurgency Conference, Washington D.C., 28 September 2006). Although not
explicitly stated in his remarks, Kilcullen alludes to this operational and organizational construct as the
means to 'operationalize' the information foundation of his proposed "Three Pillars" strategy.
[35] Hoffman, "Small Wars Revisited: The United States and Nontraditional Wars," 13.

It represents not a reordering or elimination of the strategic, operational or tactical levels of war, but instead a change in war's subjective nature – what has changed is war's context, not its essential nature. Hence that "temporal advantage" of information accrues to a combatant, but only in the context of the situation which offers advantage and only for a finite period of time.

What makes it critical is adversary use of that "positional advantage" offered by information to target our critical vulnerability and center of gravity that is political will. How we protect that center of gravity is not, as illustrated, an elimination of operational art as the means to link tactical action to strategic objectives nor is it to add a fourth – political – level of war. Instead, how we protect it is to undertake actions that get at the nature of the war we are fighting and the adversary we face.

First, we need a comprehensive strategy to fight this, the first war of the Information Age. As such, and as a "war of perceptions", the integrated application of information operations must provide the basis for whatever strategy is developed. Second, the U.S. must acknowledge and protect the center of gravity that is political will, and the closely related issue of legitimacy. The details of how this is done are less important than acknowledging the absolute importance of will and legitimacy in the Information Age; however, including them among a new set of the principles of war is a good place to start. Finally, the U.S. government must determine departmental-level responsibility for applying the informational element of national power. The Department of State provides the best option in terms of its global footprint; its growing importance and lead for stability, transition and reconstruction operations; and its potential ability to

integrate the efforts of both the interagency and international partners through its country teams.

As one observer has commented, the United States enjoys unprecedented command of the "global commons" – sea, space, and air; and, that command of those "commons" is a key military enabler, and adversaries seeking to challenge us will avoid the "commons" and seek instead to do so in "contested zones."[36] To that list of "global commons" the realm of information, information technology, and information operations must be added. Currently, they represent just such a "contested zone," and, as Hoffman points out, our adversaries will challenge us there to gain positional advantage. The U.S. excels in the technical, quantitative aspects of the information "global commons."   To protect our critical vulnerabilities and center of gravity, we must seek to dominate in the qualitative, cognitive and psychological domains of that information commons as well.

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[36] Barry R. Posen, "Command of the Commons: The Military Foundation of U.S. Hegemony," *International Security* (Summer 2003): 5-8.

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